

ABSTRACT:

A *Candida albicans* bloodstream infections cause significant morbidity and mortality in hospitalized patients. Filament formation and adherence to host cells are critical virulence factors of *C. albicans*. Multiple filamentation regulatory pathways have been discovered, however the downstream effectors of these regulatory pathways remain unknown. The cell surface protein, Als1p, is a downstream effector of the filamentation regulatory pathway and is regulated by Efg1p. Als1p mediates adherence to endothelial cells in vitro and is required for virulence. The blocking of adherence by the organism is described resulting from the use of a composition and method disclosed herein. Specifically, a pharmaceutical composition comprised of a gene product from the ALS1 gene family is administered as a vaccine to generate an immune response capable of blocking adherence of the organism.